

THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:

1. A method for manufacturing a texturised proteinaceous meat analogue product, said product having a relative water activity of lower than about 0.8 and including about 20 to 80% by weight edible proteinaceous materials selected from the group consisting of predetermined mixtures of defatted soy flour, soy meal, soy concentrate, cereal gluten (in vital or starch-containing form) and egg white powder; up to about 5% by weight of edible mineral binding and cross-linking compounds; and up to about 50% by weight of an edible humectant system consisting of a mixture of glycerol and glucose in a predetermined ratio; said method including:

subjecting, in an extruder, a mixture of materials as defined above, to mechanical pressure and heat sufficient to convert the mixture into a hot protein lava; and

extruding the protein lava through and from a temperature controlled cooling die which cools and increases the viscosity of the protein lava to obtain a cohesive, texturised, extrudate slab or ribbon in which vapour-flashing is substantially inhibited.

2. The method of claim 1, wherein said mixture contains about 25% by weight glycerol and about 5% by weight of glucose.

3. The method of any preceding claim, wherein said meat analogue product has a relative water activity of between about 0.55 and about 0.68.

4. The method of any preceding claim, wherein said extruder is a twin-screw extruder with between four and six barrel sections and a screw speed operating in the range 300rpm to 550rpm.

5. The method of claim 4, wherein said extruder has five barrel sections and said screw speed is about 500rpm.

6. The method of claims 4 or 5, wherein each extruder barrel section has a length to diameter ratio of about 4.
7. The method of any preceding claim, wherein the temperature of said protein lava is restricted to less than about 120°C.
8. The method of any preceding claim, wherein the solidified extrudate slab or ribbon is further subjected to suitable size-reduction techniques for producing extrudate shreds that resemble in consistency and texture flaked or shredded meat.
9. The method of claim 8, wherein said size-reduction includes shredding in a hammer mill.
10. The method of claim 9, wherein said hammer mill includes a cage plate with a plurality of elongate discharge openings and a plurality of hammer bars hinged to discs attached to a rotating shaft.
11. The method of claim 10, wherein the extrudate is transferred directly from the cooling die to the hammer mill.
12. The method of any preceding claim, further including the step of adding meat based product into said mixture.
13. The method claim 12, wherein said meat-product is added directly to said protein lava.
14. The method of any preceding claim, wherein said mixture has a total moisture content of between about 15% and about 40% by mass.
15. The method of any preceding claim, wherein said mixture includes:

a dry ingredient blend, said dry ingredient blend making up about 50% of meat analogue product mass and including (by mass) about 40% defatted soy

flour, about 40% vital wheat gluten, about 0.5% nutritional vitamin supplements, about 8.5% mineral supplements, about 2.0% flavouring agents, about 4.3% colouring agents and about 4.7% carbohydrate;

a humectant blend, said humectant blend making up about 30% of meat analogue product mass and including about 83% glycerol and about 17% glucose by mass; and

meat based material, said meat based material making up about 20% of extrudate mass and consisting of comminuted material derived from one or more animals selected from the group consisting of poultry, fish, ovines, bovines and porcines.

16. A meat analogue product produced by a process according to any preceding claim.